IN THE CLAIMS:

Please amend the claims as follows:

Claims 1-16 **(Cancelled)**

17. **(Currently amended)** A machine programming and control system, comprising:

a machine;

a computer based controller coupled to the machine and being adapted to edit, debug, and generate a continuous multi-block flowchart and to control the operations of the machine in accordance with the flowchart; and

a display coupled to the computer [[~~based controller~~]] based controller adapted to aid in editing and generating the flowchart, the display including a screen divided into a plurality of columns and rows, the display [[~~for~~]] adapted to display the flowchart with a plurality of blocks, each of the plurality of blocks being disposed within a cell defined by the columns and rows.

18. **(Currently amended)** The system, as set forth in claim 17, wherein the computer based controller automatically generates high level source code for the program from the flowchart.

19. **(Previously presented)** The system, as set forth in claim 17, wherein the computer based controller automatically draws a connecting line between two associated ones of the blocks after editing.

20. **(Currently amended)** The system, as set forth in claim 17, wherein the display is adapted to display a split screen having two portions and selectively displaying blocks in at least one of the two portions.

21. **(Previously presented)** The system, as set forth in claim 17, wherein the display is adapted to form a debugging window for displaying the blocks and having a tool bar for controlling program flow.

22. **(Previously presented)** The system, as set forth in claim 21, wherein the tool bar includes a toggle labels button and the computer based controller responds to actuation of the button for switching between default labels and alternate labels displayed for the blocks.

23. **(Previously presented)** The system, as set forth in claim 21, wherein the tool bar includes a Select Active Block button and the computer based controller responds to actuation of the button for displaying a currently active one of the blocks.

24. **(Currently amended)** The system, as set forth in claim 21, wherein the tool bar includes an Insert/Remove breakpoint button and the computer based controller responds to actuation of the button for displaying a currently active one of the blocks in a predetermined color and stopping execution of [[~~the~~]] a program before executing the currently active block.

25. **(Previously presented)** The system, as set forth in claim 24, wherein when the program reaches one of the blocks having a breakpoint, the computer based controller responds by changing the predetermined color to another predetermined color.

26. [[~~27.~~]] **(Currently amended)** The system, as set forth in claim 17, wherein the computer based controller includes means for adding a break point associated with a flowchart block and wherein the computer based controller being adapted to stop at the break point during a [[~~the~~]] debugging mode.

27. [[~~28.~~]] **(Currently amended)** The system, as set forth in claim 20, wherein the computer based controller includes means for selectively displaying a second set of blocks in [[~~an other~~]] another of the portions.

28. [[~~29.~~]] **(Currently amended)** The system, as set forth in claim 20, wherein the computer based controller includes means for selectively displaying a list of source code associated with the first of the blocks in [[~~an other~~]] another of the portions.

29. [[~~30.~~]] **(Currently amended)** The system, as set forth in claim 20, wherein the computer based controller includes means for selectively displaying one of a second set of blocks and a list of source code associated with the first of the blocks in [[an other]] another of the portions.

30. [[~~31.~~]] **(Currently amended)** The system, as set forth in claim 17, wherein a width of each column and a height of each row is determined in accordance with a size and spacing of the blocks.

31. [[~~32.~~]] **(Currently amended)** A method of machine programming and control, comprising the steps of: editing and generating a continuous multi-block flow chart via a computer based controller, the flow chart representing a program for controlling the operations of a machine connected to the computer based controller; operating the machine in accordance with the flowchart; and, displaying a plurality of blocks on a screen divided into a plurality of columns and rows, the plurality of blocks comprising the flowchart, each of the plurality of blocks being disposed within a cell defined by the columns and rows.

32. [[~~31.~~]] **(Currently amended)** The method, as set forth in claim [[~~32~~]] 31, wherein a width of each column and a height of each row is determined in accordance with a size and spacing of the blocks.

33. [[~~32.~~]] **(Currently amended)** The method, as set forth in claim [[~~32~~]] 31, including the step of automatically generating high level source code for the program from the flowchart.

34. [[~~35.~~]] **(Currently amended)** The method, as set forth in claim [[~~32~~]] 31, including the step of automatically drawing a connecting line between two associated ones of the blocks after editing.

35. [[~~36.~~]] **(Currently amended)** The method, as set forth in claim [[~~32~~]] 31, including the step of displaying a split screen having two portions and selectively displaying blocks in at least one of the two portions.

36. [[~~37.~~]] **(Currently amended)** The method, as set forth in claim [[~~32~~]] 31, including the step of forming a debugging window for displaying the blocks and having a tool bar for controlling program flow.